ARGONNE NATIONAL LABORATORY

INTRA-LABORATORY MEMO

May 30, 2003

To: E. Chang AOD

From: J. T. Davis EQO-Industrial Hygiene

Subject: **INDUSTRIAL HYGIENE SURVEY SUMMARY REPORT – Lead Dust**

Operation Surveyed: Lead Surface Contamination Cleanup

Location Surveyed: Building 432, 7-ID-C and 7-ID-D

Material or Hazard Measured: Lead

Method of Measurement: Surface: Whatman #44 with deionized water
Analysis by Flame Atomic Absorption

Sample Description and Results:

Surface lead sampling was conducted following a second cleaning of the floor in experiment enclosures 7-ID-C, 7-ID-D and the surrounding area. Surface lead samples were collected from the floor in areas near those previously sampled. Results are shown in Table 1. Additional surface lead samples were requested in the labs of LOM 432. Results of these additional samples are shown in Table 2.

Cleaning resulted in reductions of lead on surfaces to levels below the surface lead cleanup criterion.

Applicable Standards: OSHA Lead in Construction, 29 CFR 1926.62, Inspection and Compliance Procedures
Surface Contamination: 200 μg/sq. ft. (22 μg/100 cm^2)

Recommendations:

Lead on surfaces within and surrounding the experiment enclosures meets the surface lead criterion. No further recommendations are made.

This monitoring was done to evaluate workplace exposure conditions. Employees have a right to exposure monitoring results that affect them. Recent occupational exposure regulations specify that employees be notified in writing.

Supervisors in areas monitored must notify employees of representative sampling results in writing, either individually or by posting sampling results in an area accessible to affected personnel. The entire survey report need not be presented; however, where exposures exceed permissible exposure levels, planned corrective action must be indicated. Records of this notification must be maintained by your Division in an auditable form and may be reviewed during DOE or internal audits. If you or employees have questions regarding interpretation of results, contact Industrial Hygiene at 2-3310.

Survey Date: 4/24/2003
Survey By: J.T.Davis, M. Malik
Analysis By: D. Seeman

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IH File: Building 432
Lead

TABLE 1
BUILDING 432, 7-ID-C AND 7-ID-D
SURFACE DUST SAMPLING FOLLOWING SECOND FLOOR CLEANING
DETAILED SAMPLE DESCRIPTION AND RESULTS

SAMPLE	DATE	LOCATION	LEAD CONC. ($\mu g/100cm^2$) [1]
34508	4/24/03	Floor below window inside hutch (6 in. from upstream wall, 69 in. from inboard wall)	5.78
34509	4/24/03	Floor inside hutch (126 in. from upstream wall, 104 in. from inboard wall)	12.4
34510	4/24/03	Floor below window inside hutch (4 in. from downstream wall, 46 in. from outboard wall)	4.4
34511	4/24/03	Outside hutch 7ID-C, lower ledge of upstream wall (2 in. from upstream wall, 68 in. from inboard wall)	4.32
34512	4/24/03	Floor outside door to 7-ID-C (5 ft. from 7-ID-C door, 8 ft. from upstream wall)	2.8
34513	4/24/03	Inside hutch 7-ID-D, lower ledge of upstream wall below window (2 in. from upstream wall, 58 in. from outboard wall)	8.22
34514	4/24/03	Inside hutch 7-ID-D, floor near upstream wall (21 in. from upstream wall, 69 in. from outboard wall)	3.5
34515	4/24/03	Floor outside door to 7-ID-D (4 ft. from 7-ID-D door, 8 ft.4 in. from downstream wall)	5.02
34516	4/24/03	Floor at outboard walkway (19 ft. 7 in. from 7-ID-C door, 78 in. from column 85)	3.2

[1] micrograms of Lead/100 square centimeters of surface

TABLE 2
BUILDING 432, D030 AND D020
SURFACE LEAD DUST SAMPLING
DETAILED SAMPLE DESCRIPTION AND RESULTS

SAMPLE	DATE	LOCATION	LEAD CONC. ($\mu g/100cm^2$) [1]
34517	4/24/03	D030 Floor inside door to lab (1 ft. from door, 3 ft. from inboard wall)	4.18
34518	4/24/03	D030 Floor inside door in outboard wall (1 ft. from door, 3 ft. from bench)	< 2.5 [2]
34519	4/24/03	D020 Floor inside door in outboard wall (1 ft. from door, 4 ft. from bench)	< 2.5
34520	4/24/03	D020 Floor inside door to lab (1 ft. from door, 5 ft. from inboard wall)	12.5

[1] micrograms of Lead/100 square centimeters of surface
[2] Samples identified by < were less than the analytical reporting limit for the method (2.5 μg of Lead/sample)